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WHAT YOU SHOULD KNOW ABOUT



LEPTOSPIROSIS

PROGRAM AID NO. 429

UNITED STATES DEPARTMENT OF AGRICULTURE

KNOW THE DISEASE

WHAT LEPTOSPIROSIS IS . . .

Leptospirosis is a bacterial disease that affects both wild and domestic animals, and also humans. Infection may sometimes originate from rodents and other wild animals.

The disease may be spread from animals to humans, or from one animal to another. Where careful sanitation is practiced, the disease is not normally spread from one human to another, or from humans to animals.

The normal incubation period of the disease ranges from 7 to 21 days.

WHERE LEPTOSPIROSIS IS FOUND . . .

Leptospirosis is found in many countries of the world, including the United States. In this country, the disease has been found in every State, in every climatic zone, and during all seasons.

WHAT CAUSES LEPTOSPIROSIS . . .

The disease is caused by a number of different strains of bacteria called *Leptospira*. At present, 56 strains of *Leptospira* are known; there may be others. Of the known strains, 10 have been isolated in the United States, and evidence suggests the presence of 2 more. Several strains are common to domestic animals.

ANIMALS AFFECTED BY LEPTOSPIROSIS . . .

Cattle, swine, sheep, dogs, rats, mice, skunks, raccoons, beavers, deer, elk, wildcats, opossums, foxes, horses, and bats are known to become infected with leptospirosis. In addition, humans may also become infected with the disease.

HOW LEPTOSPIROSIS IS SPREAD . . .

Leptospirosis may be spread by—

- Eating or drinking contaminated food or water. Animals may become infected if they are fed milk from cows in the early stages of the disease; or if they drink from streams or water-holes draining from infected areas.
- Bacteria entering the body through the skin, or through membranes of the eyes, nose, or mouth.

This may be by contact with infected animals or with infected urine. Infected cattle shed bacteria in the urine for periods of from several weeks to several months. Swine and dogs often shed for longer periods. Mice and rats may shed bacteria for a lifetime.

HOW CAN YOU TELL IF YOUR CATTLE ARE INFECTED . . .

Many leptospirosis symptoms are also symptoms of other diseases. The only sure way to diagnose the disease is by laboratory blood test. However, suspect leptospirosis if your animals show any of the following signs:

- Abortion may be the first noticeable sign of infection in your herd. It commonly occurs during the last 3 months of pregnancy, but it can happen any time.
- Full-term calves may be born dead or weak.
- Afterbirth may be retained.
- Milk production may drop, or stop completely.
- Milk may appear bloody, or may be yellow and thick like colostrum.
- Cow's udder may appear flabby, but is not inflamed.
- Urine may be bloody or discolored. Color may vary from mild pink to nearly black.
- Cow may have a fever—often as high as 105° or 107°.
- Cow may lose its appetite or lose weight.
- Membranes of the eyes, nose, or mouth may have a white, yellow, or brownish appearance.

An animal may be infected without showing any of these signs. Also, some animals that apparently have recovered from leptospirosis may still carry the disease and spread infection to other susceptible animals for varying periods of time. Severe cases may result in death.



WHAT YOU CAN DO ABOUT LEPTOSPIROSIS

PREVENTION . . .

- Isolate replacement animals you bring into the herd. Add these animals only after they have passed two successive negative blood tests at least 30 days apart.
- Isolate sick or aborting animals from the rest of the herd.
- Disinfect all buildings where sick or infected animals have been housed.
- Make sure buildings where animals are housed are kept clean at all times.
- Feed and water animals under sanitary conditions, especially if infection has been found in your herd. If you feed and water your animals as a unit, make sure mangers, racks, and tanks are cleaned often, and clean, fresh feed and water are provided. Avoid feeding animals on the ground where infected animals can contaminate feed.
- Avoid watering animals in ponds or creeks. Fence off such areas where necessary.
- To build up the level of immunity in your herd, vaccinate replacement animals—also healthy animals. When vaccinating your herd, keep in mind that the degree of immunity may vary from one animal to another.
- Some cattle that have been infected and have recovered may still carry the disease and spread infection to other susceptible animals for varying periods of time. For this reason, animals

that have recovered from infection should be isolated from healthy animals in the herd until laboratory tests show they are no longer carriers of infection. However, animals that have recovered from infection are seldom reinfected by the same strain of *Leptospira*.

TREATMENT . . .

No effective treatment for leptospirosis has been developed. Antibiotics are sometimes given infected animals. However, available evidence indicates that, while antibiotics may relieve some of the symptoms, they do not cure the disease.

If symptoms indicate you may have infection in your herd, call a veterinarian immediately so that he can have the necessary laboratory tests run to detect infected animals as soon as possible. When infected animals are found, separate them from the rest of the herd to prevent further spread of the disease to healthy animals.

WHAT TO DO WHEN YOU SUSPECT INFECTION . . .

1. Isolate sick animals immediately.
2. Get in touch with your local, State, or Federal veterinarian, who will test animals suspected of leptospirosis.
3. If the disease is found, ask your veterinarian to help you set up a plan to keep infection from spreading to healthy animals in your herd—or to your neighbor's herd.

Prepared by the Animal Disease Eradication Division
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